Section 4
Bidder's Products, Methodology, and Approach to the Project

4.1 FACTS II Requirements Summary	4.11 Interfaces
4.2 Functional Requirements	4.12 System Development
4.3 Technical Requirements	4.13 System Testing
4.4 Customer Relations Management Tools	4.14 System Training
4.5 Project Initiation and Management	**4.15 Conversion**
4.6 System Hardware	4.16 System Implementation
4.7 System Planning and Analysis	4.17 Post Implementation Support
4.8 Requirements Verification	4.18 Support Federal Review
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4.15 Conversion

RFP reference: 6.15 Conversion, Page 56

Deloitte brings an automated conversion solution that minimizes the risk associated with a large data conversion based on our experience in converting data for large-scale Child Services solutions. Our approach focuses on minimizing manual conversion through our iterative conversion methodology.

section HIGHLIGHTS

- Deloitte's Iterative conversion process rigorously tests conversion process
- Deloitte's data cleansing methodology improves data quality
- Use of conversion score card to continuously evaluate data quality and

Deloitte understands that the successful implementation of FACTS II is dependent upon a quality data conversion effort. Converting data from disparate legacy systems into one integrated solution can be a daunting task. Despite this challenge, we have successfully completed numerous data conversion efforts with a scope similar to the FACTS II project.

The conversion of historical child welfare data is also important to support the ongoing business operations and reporting such as National Child Abuse and Neglect Data System (NCANDS), Adoption and Foster Care Analysis and Reporting (AFCARS) and National Youth in Transition Database (NYTD) which require a historical view of data. Following a well-organized and executed conversion strategy throughout the FACTS II project will minimize disruptions in the caseworker's workflow and contribute to a seamless transition from the existing applications and processes to FACTS II.

Deloitte's established conversion approach and deep understanding of the child services data conversions help us to mitigate the challenges of FACTS II data conversion. Deloitte proposes an iterative approach, and results improve with each run as data issues are

identified and addressed. We will continue to enhance the automated conversion rules to address data issues that arise during conversion. In the event that an issue cannot be addressed with automation, we work with DSCYF staff to identify an approach to perform manual correction.

Our approach for converting data from legacy systems has demonstrated to be very effective for our clients in Alabama, Maryland, Michigan, and Pennsylvania, to name a few. Deloitte works closely with our clients to refine the criteria and various business rules for data conversion, collaborating through the project phases in order to achieve successful data conversion.

In prior child services data conversions, Deloitte has successfully worked with state and county governments to create a distinctive and transparent solution that identifies and resolves the specific obstacles that occur within data conversion. As part of our implementation planning process we focus on conversion readiness activities to prepare staff for the final conversion. Our conversion solution is based on data conversions of similar size and scope and Deloitte will provide DSCYF with a flexible solution using established methodologies, lessons learned, and a team rich in technical and functional knowledge. DSCYF can rely on our experience to mitigate the inherent risks associated with data conversion, to keep data quality high, and minimize manual clean up required. Below table summarizes our conversion approach's feature and benefits.

Deloitte's Data Conversion features	Deloitte Approach Benefits to DSCYF
Accurate, complete, and easy-to maintain data mapping confirming quality conversion results	Data Mapping best practices and tools with clear-to-read and understand reports
Tried and true conversion concepts and assets	Reduces development timeline through reuse of assets like mapping document, play book etc
Constant central tracking mechanism of conversion progress	Improve stakeholders understanding of the required actions to manage the conversion plan.
Iterative development, testing and implementation approach	Continual improvement of data quality and reduction in manual data entry with each cycle
Staff with proven conversion, social service and case management expertise	Uses State staff time more efficiently and simplifies conversion for FACTS II stakeholders Minimizes re-work by avoiding pitfalls identified completing projects similar to FACTS II

Table 4.15-1. Features and Benefits of Our Data Conversion and Migration Solution

Conversion Approach and Strategy

RFP reference: 6.15 Conversion, Page 56

Proposals should address the Bidder's **approach** to analyzing the quality of the legacy data; the methods to be used for final reconciliation of converted data, as applicable; the Bidder's recommendations for how many years of data should be converted; the Bidder's strategy for prioritizing and converting data from stand alone databases and strategies; and, the Bidder's proposed timelines for conversion activities.

Deloitte's success in automated conversions of similar nature in past engagements has been stellar. In our most recent SACWIS implementation for the State of Alabama FACTS, Deloitte achieved an extremely successful 98 percent overall automated conversion rate. This conversion rate has been derived by combining several individual conversion factors and their rates as specified in the table below:

Alabama FACTS Data Conversion Results		
Data Type	**% Automatically Converted**	**Amount Converted**
Referrals	97%	796,134
Case	99%	197,532
Clients	98%	2,255,571
Provider	98%	45,847
TOTAL	**98% (Avg)**	**5,504,808**

Table 4.15-2. Alabama Conversion Results

Additionally, in some of our other Social Service system data conversion experiences across the United States our clients faced similar challenges with multiple source systems and large amounts of data. Below is a table illustrating some of our prior successes in automated data conversion.

Deloitte's Prior Conversion Success			
System Name	**Number of Source Systems**	**Amount of Data**	**Percent of Cases or Clients Successfully Converted**
Maryland CHESSIE	3	475,413 Clients	100% of Client Data
California Administrative Office of the Courts Case Management System	4	838,244 Cases	99.96% of Case Data
California CalWIN Welfare Eligibility System	15+	2,074,903 Cases	99.21% of Case Data
Texas TIERS Welfare Eligibility System	6	2,700,000 Cases	98% of Case Data
Michigan BRIDGES	3	3,180,597 Cases	99.9%

Table 4.15-3. Deloitte's other Conversion of similar size, scope, and diversity to FACTS II

While the table above represents our conversion success of Integrated Services Management systems, Deloitte has successfully converted data for our SACWIS implementations that include DC, Maryland, Alabama, Massachusetts, West Virginia and Oklahoma.

We understand that we need to convert data from 4 disparate sources into one integrated solution. Deloitte has successfully completed conversions of similar size and nature in other states as demonstrated above by using a time tested conversion approach that is efficient and a team that has the required technical and integrated case management experience. In order to provide a conversion solution to FACTS II, you will notice that in our approach we pay particular attention to improving data conversion results and addressing specific conversion risks. The remainder of this section focuses on addressing the specific conversion needs of FACTS II. Our focus is on clearly identifying Deloitte's solution for each aspect of conversion as well as some of the common challenges associated with conversion and how we have helped clients overcome these challenges.

Our overall approach to data conversion includes major activities to be performed for conversion such as Planning, Design, Building, and Testing of the conversion software. The conversion approach is an iterative solution based on lessons learned from testing, practice conversions and go-live events. It is crucial to remember that conversion is not an independent activity, but instead is linked to various other activities throughout the entire life of the implementation.

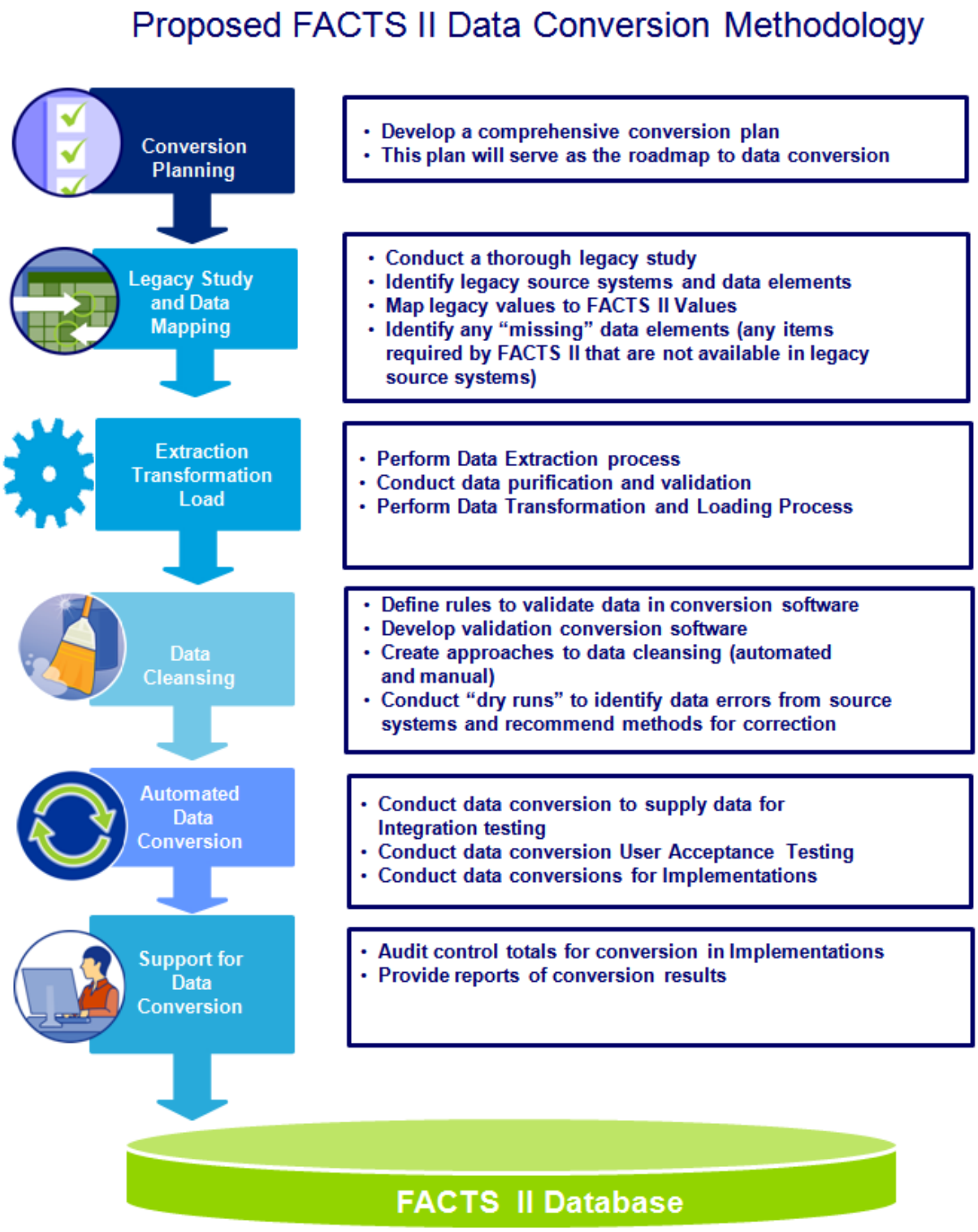

Figure 4.15-1. Data Conversion Approach.
Our Iterative Data Conversion Approach includes broad conversion planning and preparation, carefully developed conversion programs and manual data cleansing procedures when automated conversion is not possible, and an iterative process to continually refine the conversion process.

Our experience has shown that a successful data conversion process is based on an iterative approach. Conversion results show a positive trajectory in improvement with each run as data issues are identified and addressed. We continue to enhance automated conversion rules to address data issues that arise during conversion. In the coming sections we will provide an overview of key phases that includes

- Conversion planning
- Legacy Study and Data Mapping
- Data Extraction, Transformation and Load
- Data Cleansing
- Automated Data conversion
- Support

Conversion Planning

Planning is a critical phase in a successful data conversion and go-live. Our experience in SACWIS and other large-scale social services implementations has demonstrated that careful planning alongside key stakeholders is the key to a successful deployment. The conversion plan will illustrate the process for gathering requirements, assessing those requirements, and updating them as appropriate. The output of planning is a conversion plan that details all activities involved for FACTS II conversion and conversion roadmap illustrating overall approach to performing a necessary data conversion.

The tasks in the figure below represent a sample of how the activities for data conversion and migration are detailed in the project work plan.

	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1024	**Activity 6.15 Conversion**	**372 days**	**Mon 10/10/11**	**Tue 3/12/13**		**Technical Team,Functional Team,QA Vendor**
1025	**Task 6.15.1 Data Conversion Plan**	**28 days**	**Mon 10/10/11**	**Wed 11/16/11**		
1026	Prepare Data Conversion Plan Template	1 day	Mon 10/10/11	Mon 10/10/11		
1027	Template Review	1 day	Tue 10/11/11	Tue 10/11/11	1026	
1028	Template Approved	0 days	Tue 10/11/11	Tue 10/11/11	1027	
1029	Prepare Data Conversion Plan	5 days	Wed 10/12/11	Tue 10/18/11	1028	
1030	**Deliverable 6.15.1 Data Conversion Plan**	**21 days**	**Wed 10/19/11**	**Wed 11/16/11**	**1029**	
1031	Finalize Deliverable 6.15.1	1 day	Wed 10/19/11	Wed 10/19/11		
1032	Deliverable Complete	0 days	Wed 10/19/11	Wed 10/19/11	1031	
1033	Deliverable Review	10 days	Thu 10/20/11	Wed 11/2/11	1032	
1034	Deliverable Resolution	10 days	Thu 11/3/11	Wed 11/16/11	1033	
1035	Deliverable Approved	0 days	Wed 11/16/11	Wed 11/16/11	1034	
1036	**Task 6.15.2 Data Conversion Specification & Mapping**	**97 days**	**Thu 10/20/11**	**Fri 3/2/12**	**1032**	
1037	Prepare Data Conversion Specification & Mapping Template	1 day	Thu 10/20/11	Thu 10/20/11		
1038	Template Review	1 day	Fri 10/21/11	Fri 10/21/11	1037	
1039	Template Approved	0 days	Fri 10/21/11	Fri 10/21/11	1038	
1040	Conduct Analysis of Source Data Systems	15 days	Mon 10/24/11	Fri 11/11/11	1039	
1041	Prepare Preliminary Data Mapping	25 days	Thu 11/17/11	Wed 12/21/11	1040,475SS	
1042	Prepare Revised Data Mapping	25 days	Thu 12/22/11	Wed 1/25/12	1041	
1043	Prepare Data Conversion Specification & Mapping	5 days	Thu 1/26/12	Wed 2/1/12	1042	
1044	**Deliverable 6.15.2 Data Conversion Specification & Mapping**	**22 days**	**Thu 2/2/12**	**Fri 3/2/12**	**1043**	
1045	Finalize Deliverable 6.15.2	2 days	Thu 2/2/12	Fri 2/3/12		
1046	Deliverable Complete	0 days	Fri 2/3/12	Fri 2/3/12	1045	
1047	Deliverable Review	10 days	Mon 2/6/12	Fri 2/17/12	1046	
1048	Deliverable Resolution	10 days	Mon 2/20/12	Fri 3/2/12	1047	
1049	Deliverable Approved	0 days	Fri 3/2/12	Fri 3/2/12	1048	
1050	**Task 6.15.3 Conversion Development**	**70 days**	**Wed 2/15/12**	**Tue 5/22/12**	**1046,535**	
1051	Develop Conversion Code	70 days	Wed 2/15/12	Tue 5/22/12		
1052	**Task 6.15.4 Conversion Test Plan**	**98 days**	**Mon 2/6/12**	**Wed 6/20/12**	**1046**	
1053	Prepare Data Conversion Test Plan Template	1 day	Mon 2/6/12	Mon 2/6/12		
1054	Template Review	1 day	Tue 2/7/12	Tue 2/7/12	1053	
1055	Template Approved	0 days	Tue 2/7/12	Tue 2/7/12	1054	
1056	Prepare Conversion Test Cases	70 days	Wed 2/8/12	Tue 5/15/12	1055	
1057	Prepare Conversion Test Sequence Plan	5 days	Wed 5/16/12	Tue 5/22/12	1056	
1058	**Deliverable 6.15.4 Conversion Test Plan**	**21 days**	**Wed 5/23/12**	**Wed 6/20/12**	**1057**	
1059	Finalize Deliverable 6.15.4	1 day	Wed 5/23/12	Wed 5/23/12		
1060	Deliverable Complete	0 days	Wed 5/23/12	Wed 5/23/12	1059	
1061	Deliverable Review	10 days	Thu 5/24/12	Wed 6/6/12	1060	
1062	Deliverable Resolution	10 days	Thu 6/7/12	Wed 6/20/12	1061	
1063	Deliverable Approved	0 days	Wed 6/20/12	Wed 6/20/12	1062	
1064	**Task 6.15.5 Conversion Test**	**217 days**	**Mon 4/2/12**	**Tue 1/29/13**		
1065	Prepare Conversion Test Results Template	1 day	Mon 4/2/12	Mon 4/2/12		
1066	Template Review	1 day	Tue 4/3/12	Tue 4/3/12	1065	
1067	Template Approved	0 days	Tue 4/3/12	Tue 4/3/12	1066	
1068	Conduct Initial System Test Conversion	3 days	Wed 5/23/12	Fri 5/25/12	1050	
1069	Conduct Additional System Test Conversions	20 days	Mon 5/28/12	Fri 6/22/12	1068,751SS	
1070	Conduct Initial Integration Test Conversion	3 days	Mon 5/28/12	Wed 5/30/12	1068	
1071	Conduct Additional Integration Test Conversions	35 days	Fri 8/17/12	Thu 10/4/12	1070,806SS	
1072	Conduct Initial UAT Conversion	3 days	Thu 5/31/12	Mon 6/4/12	1070	
1073	Conduct Additional UAT Conversions	20 days	Tue 12/4/12	Mon 12/31/12	1072,873SS	
1074	**Deliverable 6.15.5 Conversion Test Results (Integration)**	**22 days**	**Fri 10/5/12**	**Mon 11/5/12**	**1071**	
1075	Finalize Deliverable 6.15.5 (Integration)	2 days	Fri 10/5/12	Mon 10/8/12		
1076	Deliverable Complete	0 days	Mon 10/8/12	Mon 10/8/12	1075	
1077	Deliverable Review	10 days	Tue 10/9/12	Mon 10/22/12	1076	
1078	Deliverable Resolution	10 days	Tue 10/23/12	Mon 11/5/12	1077	
1079	Deliverable Approved	0 days	Mon 11/5/12	Mon 11/5/12	1078	
1080	**Deliverable 6.15.5 Conversion Test Results (UAT)**	**21 days**	**Tue 1/1/13**	**Tue 1/29/13**	**1073**	
1081	Finalize Deliverable 6.15.5 (UAT)	1 day	Tue 1/1/13	Tue 1/1/13		
1082	Deliverable Complete	0 days	Tue 1/1/13	Tue 1/1/13	1081	
1083	Deliverable Review	10 days	Wed 1/2/13	Tue 1/15/13	1082	
1084	Deliverable Resolution	10 days	Wed 1/16/13	Tue 1/29/13	1083	
1085	Deliverable Approved	0 days	Tue 1/29/13	Tue 1/29/13	1084	
1086	**Task 6.15.6 Final Conversion**	**32 days**	**Mon 1/28/13**	**Tue 3/12/13**		
1087	Prepare Final Conversion Test Results Template	1 day	Mon 1/28/13	Mon 1/28/13		
1088	Template Review	1 day	Tue 1/29/13	Tue 1/29/13	1087	
1089	Template Approved	0 days	Tue 1/29/13	Tue 1/29/13	1088	
1090	Conduct Pass One Production Conversion	3 days	Wed 1/30/13	Fri 2/1/13	1089,1085	
1091	Conduct Production Conversion Sanity Test	3 days	Mon 2/4/13	Wed 2/6/13	1090	
1092	Conduct Pass Two Conversion	3 days	Thu 2/7/13	Mon 2/11/13	1091	
1093	**Deliverable 6.15.6 Final Conversion Test Results**	**21 days**	**Tue 2/12/13**	**Tue 3/12/13**	**1092**	
1094	Finalize Deliverable 6.15.6	1 day	Tue 2/12/13	Tue 2/12/13		
1095	Deliverable Complete	0 days	Tue 2/12/13	Tue 2/12/13	1094	
1096	Deliverable Review	10 days	Wed 2/13/13	Tue 2/26/13	1095	
1097	Deliverable Resolution	10 days	Wed 2/27/13	Tue 3/12/13	1096	
1098	Deliverable Approved	0 days	Tue 3/12/13	Tue 3/12/13	1097	
1099						

Figure 4.15-2. Sample of Task and Work Schedule for Data Conversion and Migration Activities. This figure is a sample of some of the detailed data conversion and migration tasks. Specific tasks are discussed with DSCYF during the requirements phase to determine what steps and activities are to be completed during the conversion process.

As depicted above, high level tasks are made up of intricate sub-tasks, each one important in the overall completion and success of the conversion process.

Legacy Study and Data Mapping

RFP reference: 6.15 Conversion, Page 56

Proposals should address the Bidder's approach to analyzing the quality of the legacy data; the methods to be used for final reconciliation of converted data, as applicable; the Bidder's recommendations for how many years of data should be converted; the Bidder's strategy for prioritizing and converting data from stand alone databases and strategies; and, the Bidder's proposed timelines for conversion activities.

Legacy Study

A key to a successful conversion is having a deep understanding of the legacy data, the data structures, and most importantly – the business rules of how the data is being collected and stored. A primary reason for having MAXIMUS on our team is because of their knowledge of the legacy system. This cannot be learned quick enough when the project is moving towards implementation. While the Deloitte team members bring a wealth of experience in SACWIS, our conversion methodologies, and data quality, our MAXIMUS teaming partner and DCYFS bring the legacy data source expertise. As a combined team, conversion planning, requirements, design, and testing is most effective.

A key component to conversion planning and a best practice in our methodology is to conduct a Legacy Study to not only identify legacy data sources but to understand their structure and the business rules of how the data is collected. Deloitte and legacy system subject matter experts identified by the DSCYF conduct this activity jointly. Our experienced analysts bring to the table the knowledge to ask the right questions and effectively acquire source system information necessary for conversion. We conduct the Legacy Study with a background understanding of the FACTS II entity model that we are mapping into as we analyze the legacy source data.

Deloitte attributes high importance to conversion as a critical component of a project's success. We bring expertise and a proven track record demonstrating our ability to complete conversions comparable to FACTS II with a high degree of data integrity and minimal manual effort. Given that the legacy systems exist for more than 15 years, we work with DSCYF to devise a plan for DSCYF to extract from legacy systems and Deloitte to convert critical case data for Day 1 "Go-Live" that creates the base FACTS II client, provider, staff case record that meets Child Protection Registry (CPR), AFCARS, NCANDS, and NYTD federal reporting needs.

Our Strategy for Converting Data from Stand Alone Databases and Strategies

The legacy study for conversion is coordinated with the approach to interfaces and the data model design. For each data element presented to users through FACTS II, the data source must be identified. FACTS II replacement systems require a "Traditional" approach to conversion. Where an interface between FACTS II and legacy system(s) is used after

the implementation, a “day one” interface file provides an opportunity to leverage interface assets for conversion For example, the initial execution of the IV-A or IV-D interfaces will be the largest transfer of data between FACTS and the corresponding systems because we are loading key tables for the first time. This initial data load, while is occurring via an interface, is actually converting data from external systems to FACTS II. For alerts/ticklers and other similar data elements a priming conversion may be necessary to establish the baseline required for FACTS II. Table below provides a high-level overview of legacy systems

Division	Unit Program	Description	Format
DSCYF	FACTS	SACWIS Legacy system	Oracle/CENTURA
DMSS	Cost Recovery Unit Provider Tracking Spreadsheet	Medicaid service provider information used to manage the Medicaid billing	MS Excel
DMSS	Education	IEP Within 30 days	MS Excel
DMSS	Education	Post-Release tracking	MS Excel
DMSS	Contracts	Contracts	MS ACCESS
DMSS	Human Resources	Training Database	MS ACCESS
DFS	OCCL	Credentials	MS ACCESS
DPBHS	Office of Prevention program outcomes where participants have DFS involvement or treatment cases	Several integrated databases. Includes CA/N substantiations at 3-month intervals over 3 years	MS ACCESS
DPBHS	Early Intervention	EI Assessments and Outcomes	MS ACCESS
DPBHS	EI – CAFAS	Child and Family Functioning Assessment	MS ACCESS
DPBHS	ADAD	Screen for drug/alcohol dependency	MS ACCESS

Table 4.15-4. FACTS I Legacy Systems

Figure below provides an overview of our understanding of how legacy systems are integrated into FACTSII.

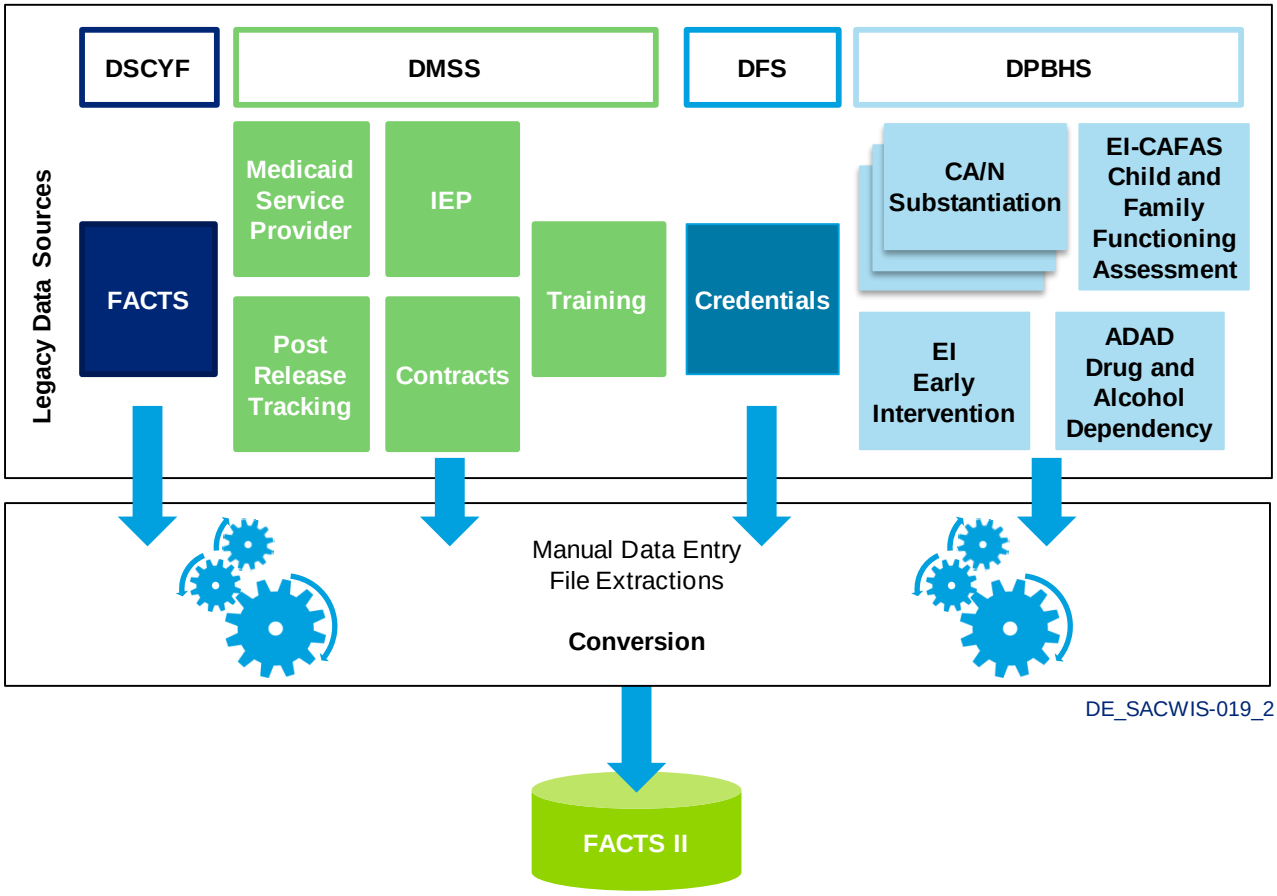

Figure 4.15-3. FACTS II Conversion Overview.
Deloitte's approach to FACTS II Data Conversion from legacy data sources.

Data Mapping

Upon completion of the Legacy Study, we begin the exercise of mapping the source data to FACTS II data elements. This process yields both the translation rules and the data validation rules required to verify that FACTS II is functional and populated with integral data. A conversion specification document will be created with the data mappings and the identified data validation/transformation rules.

As part of this data mapping process, every attribute in the FACTS II database is analyzed to determine the specific data elements that are required from a source data perspective. This exercise provides us with a set of common data definitions to transform the source data.

In our prior conversion experience, we have used a data mapping tool that allowed us to track each element of the mapping process including the values of the prior system, the corresponding values of the new system, and information describing how a particular data element is to be translated from the previous system to the new system. We understand the importance of using a tracking tool of this nature to make certain that the logic for each data attribute is tracked and validated.

By having a solid data mapping tool as a foundation and reference for the conversion process, the translation between the data values of the old (Legacy) system and the new system are clearly defined leading to a smoother execution of the data conversion process.

Functional Model/ Data Entity	Data Element Name	FACTS Table	FACTS Column	FACTS Data Type	FACTS Data Type Length	FACTS Data Optional	DBGR Abbr	Data Source System		Data Source Data Element/Column	Data Source Data Type	Data Source Length	Data Source Optional	Hierarchy
		BLOBTABLE	MYID	DOUBLE	8	Y								
		CASETEST	C1	DOUBLE	8	Y								
		CHAINED_ROWS	ANALYZE_TIMESTAMP	TIMESTAMP	10	Y								
		CHAINED_ROWS	CLUSTER_NAME	VARCHAR	30	Y								
		CHAINED_ROWS	HEAD_ROWID	INTEGER	4	Y								
		CHAINED_ROWS	OWNER_NAME	VARCHAR	30	Y								
		CHAINED_ROWS	PARTITION_NAME	VARCHAR	30	Y								
		CHAINED_ROWS	TABLE_NAME	VARCHAR	30	Y								
		CL_SEQ	CL_ID	BIGINT	8	N								
		CL_SEQ	SEQ_NBR	INTEGER	4	N								
		CLIENTIMAGE	CLIENTID	BIGINT	8	N								
		CLIENTIMAGE	IMAGEDATA	BLOB	2147483647	N								
		COLUMN_CMNTS	COLUMN_NAME	VARCHAR	30	N								
		COLUMN_CMNTS	COMMENTS	VARCHAR	4000	Y								
		COLUMN_CMNTS	TABLE_NAME	VARCHAR	30	N								
		CONNHEADER_TRY	AGENT_ID	BIGINT	8	N								
		CONNHEADER_TRY	APPL_ID	CHARACTER	64	N								
		CONNHEADER_TRY	APPL_NAME	VARCHAR	255	N								
		CONNHEADER_TRY	AUTH_ID	VARCHAR	30	N								
		CONNHEADER_TRY	CLIENT_DB_ALIAS	CHARACTER	8	N								
		CONNHEADER_TRY	CLIENT_NNAME	VARCHAR	20	N								
		CONNHEADER_TRY	CLIENT_PID	BIGINT	8	N								
		CONNHEADER_TRY	CLIENT_PLATFORM	INTEGER	4	N								
		CONNHEADER_TRY	CLIENT_PRDID	VARCHAR	20	N								
		CONNHEADER_TRY	CLIENT_PROTOCOL	INTEGER	4	N								
		CONNHEADER_TRY	CODEPAGE_ID	INTEGER	4	N								
		CONNHEADER_TRY	CONN_TIME	TIMESTAMP	10	N								

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Figure 4.15-4 Data Mapping Tools.
Deloitte's a proven, reliable mapping tools help FACTS II data conversion data mapping process.

In prior conversions, we have used a structure similar to the one above for data mapping documentation that were demonstrated to be essential elements in past projects' success. This tool provides a built-in user interface for analysts to conduct the data mapping and for SMEs to assess and evaluate the mappings using canned reports. A precise, complete, and thorough data mapping is critical to conversion success.

As part of this Conversion Roadmap task for FACTS II, we assist in the development of a bidirectional cross-reference matrix that allows us to map, in detail, the data conversion path of the individual data element from the current systems to the target system as well as the associated data conversion rules. As part of the Data Conversion Plan deliverable, this matrix becomes the basis for a detailed data dictionary that fully documents this source versus target system cross reference and become the living data dictionary used for the length of the engagement.

During the data mapping process, we may identify data values from the Legacy system for a particular data element that may not equate to a corresponding value in FACTS II. We perform gap analysis to review missing source system data elements critical to the success of the new system. In addition, we define the changes that are required to accommodate Legacy data values that have yet to be defined on the target system database data model. Based on our experience, we have found that this is one of the more time consuming and complex tasks associated with the entire conversion effort. To

validate that these are translated correctly to the new system, we will work with DSCYF to identify standard values that can be used in the new system's database.

Data Categories from legacy systems

During mapping process, Deloitte works with DSCYF and establishes the data categories that are being converted from legacy systems. Data categories identifies and prioritizes the population of data being converted and relation to Federal Reporting and critical day one case conversion. For example we understand that placements are key for AFCARS and in order to convert placements we need the Case, Client and Provider associated with placements. Broad high-level data categories being converted from Legacy systems include:

- Intakes
- Investigations
- Clients
- Cases
- Provider Information
- Staff Information

The order in which these data entities are provided above are not intended to communicate the actual order in which data will be converted. Data categories are only used to categorize and prioritize conversion data.

Establishing Commonality across legacy systems

We have extensive experience performing conversion using MCI and MPI where we have cross referenced multiple conflicting legacy systems information to establish a complete and unduplicated master index. Establishing a unique client from disparate legacy system is key to successful quality data conversion. Deloitte proposes two approach to establish common clients and build cases. Our conversion program follows a hierarchy to identify clients that includes MCI and Attribute Matching.

MCI

MCI provides a unique ID for client present across multiple systems in Delaware and our conversion programs use this ID to establish Client ID within FACTS II. Once a client is converted to FACTS II, a link is created in a cross reference table between FACTS Client ID and MCI ID.

Next time when the same client is getting converted from a different case or a different legacy system a check will be done against the cross reference table to identify whether the same MCI exists and if it does then conversion program will uses the existing FACTS Client ID to convert and not create a new client again.

Attribute Matching

When the conversion program is not able to match clients using MCI then we define a hierarchical matching, which matches clients based on attributes of clients. For example in Alabama we used First Name, Last Name, DOB and SSN as one of matching criteria. Two clients with matching names, DOB, SSN from two different legacy systems were identified as same client and program will create one Client record within FACTS II thus eliminating duplicate clients created from conversion.

Using the common entities in legacy applications Deloitte will provide a matching logic to identify cases across systems and convert them appropriately. Deloitte understands that in- depth knowledge of legacy application and data is required to identify the correct matching logic and Deloitte in conjunction with DSCYF staff derive the most accurate and efficient matching logic appropriate for DE FACTS II conversion.

Data Extraction

We propose adopting an approach to extraction that we used successfully on previous projects. During the data extraction process for FACTS II, the custom data mapping tool in SACWISmate is configured to include the identified legacy systems along with the data extraction conditions for each system. The resulting data extract files are then available in the for data transformation. The purpose of studying this legacy data is to evaluate and determine the proper data extraction conditions to be used, which ultimately leads to the development of the formal rules and procedures for extracting the necessary data from the legacy source. Given the need for an in-depth understanding of the data and structures of each of the Legacy system, we have found that it is more efficient if the data extracts are created by the subject-matter experts from DSCYF because of their understanding and familiarity with these components.

Extraction Execution. We provide DSCYF subject-matter experts data that is required and needed for extraction from the source systems. DSCYF provides our conversion team the initial extraction data files in the agreed upon format. It should be noted that the additional activities associate with the data extraction process are, by definition, repetitive in nature and may require several executions before the data purification, and data validation processes are finalized.

Define Data Purification Needs: Cleansing the data within the source system consists of activities such as addressing missing fields by defining default values to be populated into the extraction output during the Extraction Execution task and not fixing data that may cause data integrity issues and if not completed later steps in the conversion processwill reject these records. The data cleansing phase may also involve some data cleansing on legacy data and to aid DSCYF we provide data cleansing reports that help facilitate the data elements that need to be corrected prior to conversion into the target database or before being moved from the target conversion staging database into the target production database structure.

Data Validation: Deloitte will work with DSCYF to define a process to check the integrity of the extracted data. This includes an analysis of the extracted information to confirm that

the data conforms to the output specifications agreed to during the requirements phase and verification to confirm that all the data is needed has been appropriately extracted (i.e., matching record counts, matching totals, etc).

Build and Load the Staging Database. After we receive the legacy data from DSCYF, a staging database is built within the solution that accepts the extracted data from the source systems to help validate the integrity of the information received. Each source system may have its own table structure within the staging database. This provides the conversion team a single source from which to continue with the remaining phases of the conversion flow. Upon successful extraction from the source system and submission of the extraction to the conversion team, this database is loaded. As part of this Conversion Roadmap task, we work with DSCYF to establish a mutually agreeable "freeze" date after which data structure changes no longer occur on the source systems. This is necessary in order to retain the stability and viability of the conversion process design and software and confirm a successful conversion execution.

Transformation and Load

RFP reference: 6.15 Conversion, Page 56

Proposals should address the Bidder's approach to analyzing the quality of the legacy data; the methods to be used for final reconciliation of converted data, as applicable; the Bidder's recommendations for how many years of data should be converted; the Bidder's strategy for prioritizing and converting data from stand alone databases and strategies; and, the Bidder's proposed timelines for conversion activities.

We have previously worked with other states, to develop transformation logic to successfully migrate data from multiple legacy systems to a new system and recognize that data transformation is the most critical aspect of data conversion. The data that exists in the legacy system differs significantly from the FACTS II data structure in terms of attributes, values, and relationships. The conversion programs needs to account for this difference in data structures and the relationships between the legacy systems and FACTS II to appropriately transform the legacy data so that it can be converted into the FACTS II database.

During this load activity, the transformation rules are executed against the data through conversion programs. The common data definition rules are applied to each data element, which confirms that the data eventually loaded into the FACTS II, conforms to the prescribed FACTS II data model. For example, reference table values may be transformed from numeric values to character fields. Next, data not available in the source system but required in the solution is defaulted to defined values to confirm that there is a smooth transformation process.

Analyzing the Quality of the Legacy Data

RFP reference: 6.15 Conversion, Page 56

Proposals should address the Bidder's approach to analyzing the quality of the legacy data; the methods to be used for final reconciliation of converted data, as applicable; the Bidder's recommendations for how many years of data should be converted; the Bidder's strategy for prioritizing and converting data from stand alone databases and strategies; and, the Bidder's proposed timelines for conversion activities.

Data Cleansing

Data conversion is a cycle of planning, designing, testing, converting, and assessing data. Each iteration of the conversion process helps to improve the overall results through improvements to the conversion software and/or source data. We have worked on integrated case management solutions in many other states in the past and will bring with us many important lessons learned from successful prior conversions to FACTS II on day one. Our data cleaning process revolves around two conversion activities. The first is the data purification round (DPR), and the second is a mock conversion run. Essential to the overall conversion process is the success rate at which data is converted over and the minimization of time spent post conversion performing manual conversion. In order to improve the conversion success rate, we use an iterative conversion process that allows for purification rounds and trial dry conversion runs prior to the implementation.

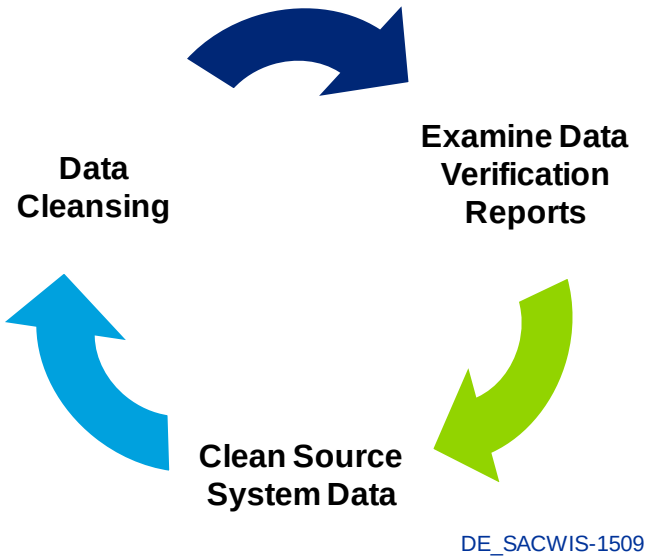

Figure 4.15-5 Data Cleansing.
The Data Purification round provides important feedback about the state of the source system data. The reports that are generated allow for targeted

Below you will find a brief overview of each of the activities and why it is important to select an experienced team to help reduce manual conversion and avoid problematic situations before they arise.

Purification Rounds

The purpose of purification is to examine the quality of the data through a set of automated processes which help determine the acceptability of the data for the conversion programs. The data conversion involves multiple rounds of data purification to track and manage the quality of the source data. After each round, reports will be generated to highlight discrepancies that need to be addressed prior to conversion. Since this is part of an iterative cycle, these data discrepancies should be addressed in the legacy system in

order to pass the next execution of the cycle. Also, sample data from the legacy data structures are used to analyze and compare against possible data discrepancies and potential problem areas.

- **Common Data Definition Compliance.** We identify data elements that must be changed to comply with the Common Data Definition as prescribed by the FACTS II data model. For example, a source system may have stored reference values as numeric values because the needs of the system were such that characters were not necessary. However, the reference table structure may dictate that reference values are stored as characters. It is during this activity that data elements are defined and flagged for data element type conversion during the Transformation phase activities.
- **Missing Data Elements.** We identify data elements where data is missing but is required per the business rules defined by Integrated Case Management System. For any such data elements, default values must be defined. During the Transformation phase, the data elements are populated as appropriate
- **Data Discrepancy Issues.** These issues address data integrity problems that arise from missing fields, incomplete data, duplicate data, incorrect data, and non-standard characters in standard fields. A potential list of significant data discrepancy errors are listed below:
- **Missing Fields.** Such as first or last name, SSN, addresses, and dates. (e.g., No SSN, or address with no City and/or Zip Code).
- **Missing Records.** Blank records or missing records that should be there in related files pertaining to a family or individual (e.g., having an entry in the payment file but no associated service provider)
- **Incorrect Data.** Either non-standard character in standard fields or cases where character data populates numeric fields (or vice versa) such as incorrect date format, etc.
- **Duplicates.** This involves duplicates between the same instance of a source system or across instances of multiple source systems. The attempt is to minimize the number of duplicates on the target system through manual data cleansing during the data cleansing phase of the project, which requires involvement from the subject-matter experts of the source systems.
- **Integrity Issues.** These data errors pertain to records in one file having more than one record in another file or other such data issues which require integrity and business logic to detect and cleanse.
- **Business Functionality Related Discrepancies.** This sort of data problem is specific to a way a particular source system user completes various business processes. The data might appear acceptable from a data discrepancy stand point but may be inconsistent with how the standard business processes should be performed. For these data discrepancies, we work closely with subject matter specialists to resolve the issue.

Mock Conversion Runs

An important component of our conversion approach is the execution of mock conversions. This process allows replicating the go-live processes for the conversion team as well as to prepare the counties towards the upcoming go-live. The mock conversion process followed by Deloitte involves processing live data for the counties. This process results in the generation of additional data cleansing and exception reports. The reports produced from the mock conversion runs identify data that did not successfully make it through the conversion process. This could include information on case data, individual data, provider data, financial data, or various other items that may have been identified in the conversion plan. Armed with this information it will be possible to locate where adjustments to the conversion process are warranted in order to improve the conversion rate.

Each of the aforementioned conversion activities provides a set of reports that highlights areas for refinement. This feedback will be communicated through various conversion reports as well as during the validation process. Exception reports generated after a mock conversion prepare the counties for pre conversion clean-up and set their expectations for the effort required after go-live. These reports provide details around the workload requirements post go-live to correct or manually enter data that was not cleansed prior to conversion and implementation.

Mock Conversion runs also helps to determine how the converted data runs against test scenarios and into the FACTS II database tables to validate the integrity and completeness of the data to support the new application, both from the database side and the application side. Since the mock conversions require the data to be of the same quality as the actual conversion data and require the new application to support converted data, this step needs to take place later in the overall application development cycle. The figure below visually depicts the process for repetitive conversion dry runs/testing.

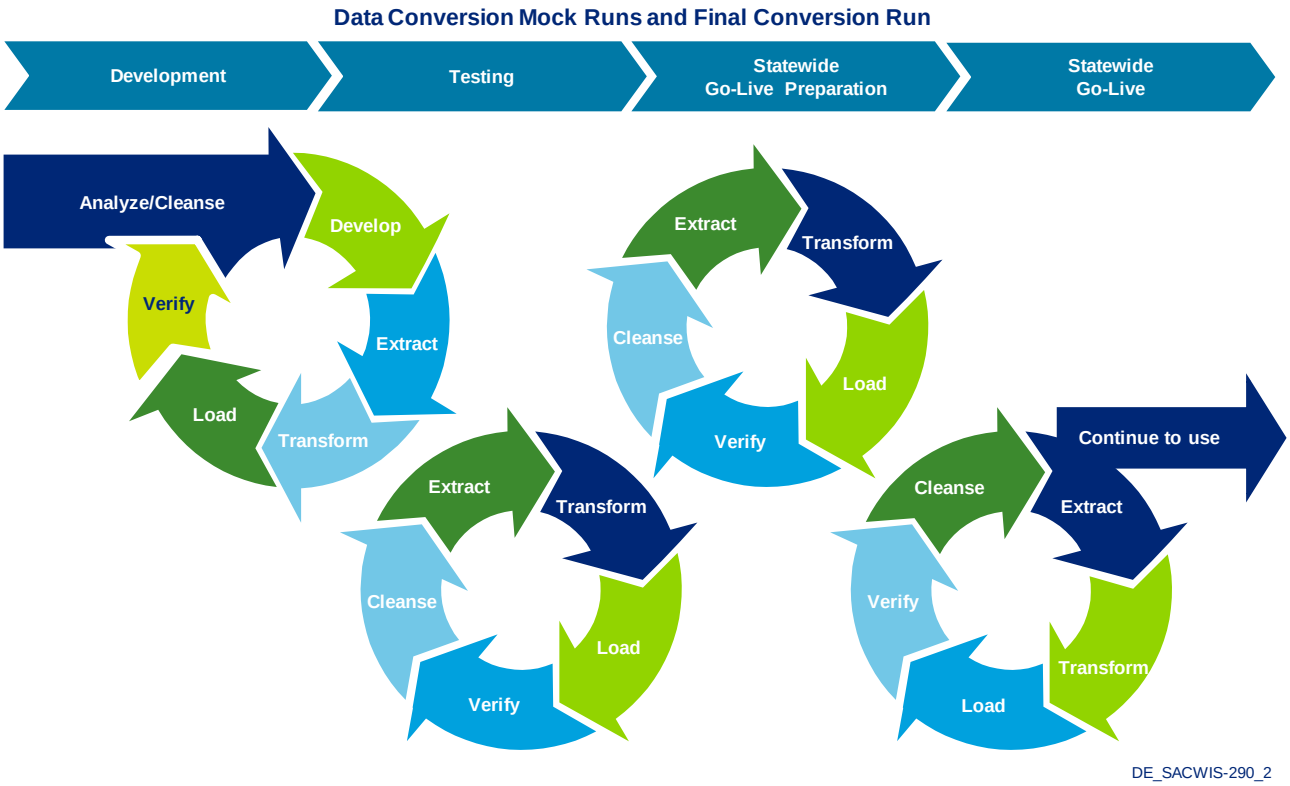

Figure 4.15-6. Iterative Approach to Data Conversion.
Iterative approach to Data Conversion from Legacy systems

Leading up to each conversion event, we conduct a minimum of two “dry run” conversions to identify any issues proactively and work to correct them in advance of the implementation.

Our approach provides the benefit of improved data conversion rate, reduced data cleanup efforts, and improved data quality. By employing an approach that allows us to run multiple test/mock conversions for data validation purposes, we progressively help DSCYF prepare for statewide implementation. This helps to reduce the risk and uncertainty associated with the actual production conversion and helps develop a repeatable, measurable and successful conversion process. This repeatable conversion process is essential for several reasons:

- **Effective Testing.** With a repeatable conversion process, the amount of time required to execute each mock conversion is validated. Our conversion logic is also verified to confirm that the correct amount of data is converted and that the quality of the converted data is high.
- **Statewide Go-Live.** Our proposed statewide “Go-Live” involves the conversion of all agreed upon data for Day 1 “Go-Live”. We work with DSCYF to prepare counties and DSCYF resources as part of the preparation to determine and finalize the schedule for the conversion.
- **Maintain Client Service.** During migration of data from one system to another, it is essential that social workers not be negatively impacted.

- **Minimize Local Office Impact.** Issues caused during the conversion of data may potentially have implications to local office operations if not identified and resolved in a timely manner.
- **Minimize changes to Legacy Processes.** Since the goal of the FACTS II implementation is to replace existing legacy systems, it is important to minimize any changes to the existing systems to support the conversion effort and focus those energies towards developing a conversion solution that relies primarily on the proposed solution technologies instead.
- **Minimize time window for conversion.** Typically large-scale conversions require extensive downtime on the part of the existing systems. Therefore, it is imperative that the conversion approach plans for minimal downtime of the existing systems, thus limiting the potential where DSCYF caseworkers would be unable to serve their clients.

We work closely with the DSCYF to identify and plan manual conversion activities that are required by DSCYF. We propose an Integrated Data Conversion and Data Quality approach to perform data cleanup using a custom data mapping tool. The following table describes our features and benefits of our proposed data conversion solution.

Methods used for Final Reconciliation of Converted Data

RFP reference: 6.15 Conversion, Page 56

Proposals should address the Bidder's approach to analyzing the quality of the legacy data; the methods to be used for final reconciliation of converted data, as applicable; the Bidder's recommendations for how many years of data should be converted; the Bidder's strategy for prioritizing and converting data from stand alone databases and strategies; and, the Bidder's proposed timelines for conversion activities.

Verification, Validation and Exception Reporting

We recognize the importance of creating verification, validation and exception reports post conversion load process. These reports focus on providing conversion success statistics and allow for the debugging of conversion related issues, mismatch issues, and other conversion related exceptions. Some of the reports that are required during the conversion effort include the legacy system data extraction control and detailed reports, data purification control and detailed reports, conversion control reports, and conversion data exception reports. Additional reports are generated on an as needed basis during the course of the conversion process. Deloitte will work with DSCYF to define a process to check the integrity of the extracted data.

- **Verification Reporting:** Verification reports confirm that all the data is converted (i.e., matching record counts, matching totals, etc). Verification reports ensure that the expected count of records equals the actual count of records that got successfully converted from the legacy systems to FACTS II. For example, during the conversion of the Alabama SACWIS system, we developed Case Load, Open Placements and many additional reports on an as needed basis to ensure that the expected matched the actual count of records that got successfully converted.

- **Validation Reporting:** Validation reports are detailed reports that include an analysis of the converted data to confirm that the data conforms to the output specifications agreed to during the requirements phase. Validation reports ensure that all the checks and balances part of extraction and transformation process were run and the data that got converted is the correct data as expected with no missing or wrong attributes, miss-match data types, etc.
- **Exception Reporting:** Fundamental to the conversion process is the generation of data exception reports. The Conversion Team defines the various reports that are required as part of the conversion effort. For example, during the conversion of the Alabama SACWIS system, we developed a report for the State that listed the exceptions that occurred for a case during the conversion process that ultimately prevented it from being converted to the new system. These were then distributed to our State conversion team counterparts for resolution of the issue that would allow the case to convert, thus identifying and completing data clean-up as a key component of conversion mock runs.

The figure below provides a summary of type of reports that are generated during a conversion run.

Legacy System	Conversion Scope	Report Description	Type of Report	Report Name
ACWIS	Custody/legal Status	This Report Reflects Legal Status Records Which Did Not Get Converted Because Mandatory Values Are Blank	Exception Report	CRPT310
ACWIS	Foster Care Cases	This Report Reflects Foster Care Cases That Were Not Converted Because There Was No Worker Assignment. Cases Should Be Assigned To A Worker To Perform Case Management Activities.	Exception Report	CRPT430
ACWIS	Placement	This Report Reflects All Placement Records With An ACWIS Service Id Without A Matching FACTS Service ID	Validation Report	CRPT080
ACWIS	Placement	This Report Reflects All Open Placement Records Without A Open Home Removal From ACWIS	Validation Report	CRPT350
ACWIS	Adoption	Adoption Finalized date missing	Validation Report	CRPT180
ACWIS	Provider	This Report Reflects Converted Closed Providers With Open Placements.	Validation Reports	CRPT450
ACWIS	Provider	List of CPA providers with no active contracts(*requires upload of manually converted provider contract information)	Validation Reports	CRPT470
ACWIS	Foster Care Cases	List Of All Cases Converted Successfully From ACWIS	Verification Report	CRPT370
ACWIS	Foster Care Cases	List Of All Successfully Converted ACWIS Case-Clients	Verification Report	CRPT390

Figure 4.15-7. List of Reports Summary

- **Planning for Verification, Validation and Exception Reports in Conversion Design.** These reports represent an important output of the conversion process as the team

moves from one phase to the next. The conversion team carefully defines then critically analyzes the results presented through these reports to confirm that the phase is moving in the right direction and that there are no surprises in later phases of the conversion execution. For example, exception reports can scan the output of the data extraction task during the Extraction phase to identify whether the expected number of records from a particular area of the source data store has been produced. Any discrepancies uncovered at this point are relatively easy to trace back to the data extraction process, which allows for uncomplicated analysis and correction. However, if exceptions are focused on at a later phase of the conversion flow, then the complexity of researching and tracking down where a problem originated becomes much more difficult and time consuming. With our approach, we propose generation of detailed exception reports and expect the conversion team to satisfy the expectations of the reports before moving to the next phase of the flow.

- **Scoring Mechanism:** The following figure provide summary report of conversion run and conversion percentage of each legacy system which determines the scoing for each conversion run.

Source System Name (Exception Reports)	State Received Source Data File Count	Extraction Fallouts Per Rules	Data Moved To Staging Schema	Data To Be Converted Per Rollout	Converting Counties % of Total	Total Records of Data Converted	Data Rejected	Data Conversion %
ASSIST Intakes Report CRPT500, CRPT530	814,556	0	814,556	213,806	26.25%	213,806	0	100.00%
ASSIST Intake Clients Report CRPT510, CRPT520	3,082,975	0	3,082,975	671,842	21.79%	671,830	12	100.00%
	Unique Persons In All Converted Intakes					414171		
	Clients That Met The Matching Criteria and Were Converted In An Intake					257659		
ASSIST Investigation Clients Report CRPT520	3,082,975	0	3,082,975	620,152	20.12%	620,148	4	99.999%
	Unique Persons In All Converted Investigations					130,978		
	Clients That Met The Matching Criteria and Were Converted In An Intake					489,170		
ACWIS Providers Report CRPT440	45,996	3	45,993	45,993		45,793		
		Business fallouts - "Deleted" providers from Source					200	

Figure.4.15-8. Conversion Run Summary and Scoring.
We use this report to provide a high level summary of records converted and scoring for each conversion run.

Deloitte addresses Data Conversion Challenges

Using our insights, experience and our past successes performing conversion activities for numerous SACWIS and Human Services applications in other states, we have developed a tested methodology for data conversion as describe in the previous sections. Table below shows how Deloitte will mitigate challenges.

Data Conversion Challenge	Deloitte Approach Addresses Conversion Challenges
Addressing data quality concerns in legacy systems with years of history and remnants of policy changes over the years	• We repeatedly assess, analyze, and identify solutions to correct or address any data quality issues.
Creating a high quality data mapping with disparate legacy systems whose data may be conflicting or overlapping	• We create a logical data mapping, using analytical tools, so data mapping issues are sorted out early in the conversion process.
Data discrepancy issues may arise from missing fields, incomplete data, duplicate data, incorrect data and/or non-standard characters in standard fields. A potential list of significant data discrepancy errors is listed below: • Missing fields such as first or last name, SSN, addresses, and dates (i.e. no SSN, address with city, and/or zip code) • Missing records or blank records could be encountered. • Incorrect data such as non-standard character in standard fields, cases where character data populates numeric fields, or vice versa, incorrect date format, etc. • Duplicates between the same instance of a source system or across instances of source systems.	• For each error found, we identify the scope of the error, working through many data cleansing runs, to determine the downstream impact to FACTS II. • We refine rules to accept errors that can be accommodated with derivations based on other values, or ignore errors based on other data in the case. • We provide quality data for FACTS II while minimizing manual efforts that may be time consuming.
Discrepancies related to business functionality could occur. The data might look acceptable from a data discrepancy standpoint, but may be inconsistent with what should be the standard way of doing business.	• We work closely with DSCYF SMEs to understand issues and define approaches to correcting them in an automated fashion whenever possible. • We draw upon our Integrated Case Management System solution experience to understand such issues and provide solutions that focus on the quality and accuracy of converted data.

Table 4.15-5. Data Conversion Challenges.

Automated Data Conversion

We believe an automated data conversion solution is beneficial and provides a solution tailored to meet FACTS II specific conversion needs. This enables reuse of components like classes at the data access level and framework components such as file handling in batch. With a custom solution the conversion process will be customized to increase the

likelihood that a greater amount of data from the legacy system will enter the new integrated case management solution without manual intervention.

Test Conversion Software

The objective of conversion testing is to be able to provide a mechanism to assess the conversion processes and programs. Conversion Testing will focus on both the automated as well as DSCYF manual processing activities needed to support the conversion effort. While testing of the conversion software remains a task separate from application testing, conversion data will be leveraged to test the application as part of the regular testing cycles.

Integration Testing

The primary objective of the integration testing of the data conversion software is to identify any potential data overlap or business rule inconsistencies in the individual components of the conversion software.

Conversion integration testing includes construction of test data and other structures needed to fully test conversion processes. Conversion testing will employ both test data and production data to support the validation of the conversion processes and programs. The use of live and diverse data promotes a higher level of testing and quality assurance. The use of Production data highlights potential data related problems in either the automated or manual process earlier in the conversion process. Necessary steps will also be taken to safeguard production data to keep it private and confidential.

Performance Tuning

Conversion software performance tuning is aimed at streamlining the execution process. It will be performed at various phases of the project including the testing phase and as lessons learned and improvements are gleamed from mock go-lives. Typically, go-live conversions are executed during the down times of the application, and usually more suited to be executed on weekends. The limited time available over a weekend makes it necessary for the conversion and validation processes to be executed within the allotted time window. The processes should take into consideration some additional time to allow for specific issues.

Support

The Deloitte team understands the value in identifying responsibilities throughout the conversion process. Our experience dealing with multiple stakeholder environments has show that one of the best practices for working in these environments is to have a solid understanding of the responsibilities for each party during the project.

Activity Name	Activity Description	
	Deloitte Team Responsibilities	DSCYF Responsibilities
Automated Conversion	• Work with DSCYF to design the automated conversion software and perform data mapping, data extraction, data verification, data conversion, and data loading. • At the end of automated conversion cycle, perform a verification of the converted data.	• Provide training, documentation, and subject matter expert knowledge. • Provide data conversion rules so that data manipulations can be done correctly. • Provide source system data extracts for testing dry runs in an agreed upon format for loading into the new system. • Provide access to source system, file formats, design documents, and other technical specifications as needed.
Source System Data Cleansing	• Execution of the conversion software for data purification rounds and mock conversion and provide DSCYF with reports to assist in targeting the source system data cleanup efforts.	• Use the conversion reports executing the source system cleanup process in order to address issues with the legacy system data.
Data Reconciliation	• Assist in the data reconciliation efforts.	• Perform the data reconciliation process with the assistance of the Conversion Team.
Conversion Go Live	• Convert the source system and provide DSCYF with reports to assist in the manual conversion after the automated conversion.	• Give go/no-go decision upon notification of final conversion result. • Take the conversion reports and perform the manual conversion activities.
Conversion Reporting	• Provide summary and detail reports at the end of each automated conversion cycle that report. These reports should indicate the overall success of conversion.	• Provide input into the initial creation of the conversion reports.
Conversion Testing	• Work with DSCYF during unit, integration, and performance testing of the conversion programs. • Perform mock conversion, UAT, and implementation testing on the conversion software and provide documentation on the results through the test results deliverable.	• Execute unit, integration, and performance testing of the conversion programs. • Create and execute scripts for UAT testing of conversion. • Create and execute scripts for mock conversion testing and use information to gather from exercise to prepare for go-live conversion.

Table 4.15-6. DE FACTS II Conversion Activities

Our Proposed Timelines for Conversion Activities

RFP reference: 6.15 Conversion, Page 56

Proposals should address the Bidder's approach to analyzing the quality of the legacy data; the methods to be used for final reconciliation of converted data, as applicable; the Bidder's recommendations for how many years of data should be converted; the Bidder's strategy for prioritizing and converting data from stand alone databases and strategies; and, the Bidder's proposed timelines for conversion activities.

Conversion Schedule

The conversion activities such as legacy study, gap analysis, data mapping, data quality criteria creation, data quality report definition, data validation, data cleansing, mock conversion (dry) runs and statewide data conversion occur during various phases of the software development life cycle. The following table outlines the conversion activity mapped to the specific SDLC phase and project timeline.

It is essential that the appropriate amount of time is allotted for each of the conversion process tasks. The following conversion schedule outlines the start and end time for each of the conversion task based on our time and effort estimations for each activity. A detailed project work plan is available in *Section 8.3, Project Management.*

	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1024	**Activity 6.15 Conversion**	**372 days**	**Mon 10/10/11**	**Tue 3/12/13**		**Technical Team,Functional Team,QA Vendor**
1025	**Task 6.15.1 Data Conversion Plan**	**28 days**	**Mon 10/10/11**	**Wed 11/16/11**		
1026	Prepare Data Conversion Plan Template	1 day	Mon 10/10/11	Mon 10/10/11		
1027	Template Review	1 day	Tue 10/11/11	Tue 10/11/11	1026	
1028	Template Approved	0 days	Tue 10/11/11	Tue 10/11/11	1027	
1029	Prepare Data Conversion Plan	5 days	Wed 10/12/11	Tue 10/18/11	1028	
1030	**Deliverable 6.15.1 Data Conversion Plan**	**21 days**	**Wed 10/19/11**	**Wed 11/16/11**	**1029**	
1031	Finalize Deliverable 6.15.1	1 day	Wed 10/19/11	Wed 10/19/11		
1032	Deliverable Complete	0 days	Wed 10/19/11	Wed 10/19/11	1031	
1033	Deliverable Review	10 days	Thu 10/20/11	Wed 11/2/11	1032	
1034	Deliverable Resolution	10 days	Thu 11/3/11	Wed 11/16/11	1033	
1035	Deliverable Approved	0 days	Wed 11/16/11	Wed 11/16/11	1034	
1036	**Task 6.15.2 Data Conversion Specification & Mapping**	**97 days**	**Thu 10/20/11**	**Fri 3/2/12**	**1032**	
1037	Prepare Data Conversion Specification & Mapping Template	1 day	Thu 10/20/11	Thu 10/20/11		
1038	Template Review	1 day	Fri 10/21/11	Fri 10/21/11	1037	
1039	Template Approved	0 days	Fri 10/21/11	Fri 10/21/11	1038	
1040	Conduct Analysis of Source Data Systems	15 days	Mon 10/24/11	Fri 11/11/11	1039	
1041	Prepare Preliminary Data Mapping	25 days	Thu 11/17/11	Wed 12/21/11	1040,475SS	
1042	Prepare Revised Data Mapping	25 days	Thu 12/22/11	Wed 1/25/12	1041	
1043	Prepare Data Conversion Specification & Mapping	5 days	Thu 1/26/12	Wed 2/1/12	1042	
1044	**Deliverable 6.15.2 Data Conversion Specification & Mapping**	**22 days**	**Thu 2/2/12**	**Fri 3/2/12**	**1043**	
1045	Finalize Deliverable 6.15.2	2 days	Thu 2/2/12	Fri 2/3/12		
1046	Deliverable Complete	0 days	Fri 2/3/12	Fri 2/3/12	1045	
1047	Deliverable Review	10 days	Mon 2/6/12	Fri 2/17/12	1046	
1048	Deliverable Resolution	10 days	Mon 2/20/12	Fri 3/2/12	1047	
1049	Deliverable Approved	0 days	Fri 3/2/12	Fri 3/2/12	1048	
1050	**Task 6.15.3 Conversion Development**	**70 days**	**Wed 2/15/12**	**Tue 5/22/12**	**1046,535**	
1051	Develop Conversion Code	70 days	Wed 2/15/12	Tue 5/22/12		
1052	**Task 6.15.4 Conversion Test Plan**	**98 days**	**Mon 2/6/12**	**Wed 6/20/12**	**1046**	
1053	Prepare Data Conversion Test Plan Template	1 day	Mon 2/6/12	Mon 2/6/12		
1054	Template Review	1 day	Tue 2/7/12	Tue 2/7/12	1053	
1055	Template Approved	0 days	Tue 2/7/12	Tue 2/7/12	1054	
1056	Prepare Conversion Test Cases	70 days	Wed 2/8/12	Tue 5/15/12	1055	
1057	Prepare Conversion Test Sequence Plan	5 days	Wed 5/16/12	Tue 5/22/12	1056	
1058	**Deliverable 6.15.4 Conversion Test Plan**	**21 days**	**Wed 5/23/12**	**Wed 6/20/12**	**1057**	
1059	Finalize Deliverable 6.15.4	1 day	Wed 5/23/12	Wed 5/23/12		
1060	Deliverable Complete	0 days	Wed 5/23/12	Wed 5/23/12	1059	
1061	Deliverable Review	10 days	Thu 5/24/12	Wed 6/6/12	1060	
1062	Deliverable Resolution	10 days	Thu 6/7/12	Wed 6/20/12	1061	
1063	Deliverable Approved	0 days	Wed 6/20/12	Wed 6/20/12	1062	
1064	**Task 6.15.5 Conversion Test**	**217 days**	**Mon 4/2/12**	**Tue 1/29/13**		
1065	Prepare Conversion Test Results Template	1 day	Mon 4/2/12	Mon 4/2/12		
1066	Template Review	1 day	Tue 4/3/12	Tue 4/3/12	1065	
1067	Template Approved	0 days	Tue 4/3/12	Tue 4/3/12	1066	
1068	Conduct Initial System Test Conversion	3 days	Wed 5/23/12	Fri 5/25/12	1050	
1069	Conduct Additional System Test Conversions	20 days	Mon 5/28/12	Fri 6/22/12	1068,751SS	
1070	Conduct Initial Integration Test Conversion	3 days	Mon 5/28/12	Wed 5/30/12	1068	
1071	Conduct Additional Integration Test Conversions	35 days	Fri 8/17/12	Thu 10/4/12	1070,806SS	
1072	Conduct Initial UAT Conversion	3 days	Thu 5/31/12	Mon 6/4/12	1070	
1073	Conduct Additional UAT Conversions	20 days	Tue 12/4/12	Mon 12/31/12	1072,873SS	
1074	**Deliverable 6.15.5 Conversion Test Results (Integration)**	**22 days**	**Fri 10/5/12**	**Mon 11/5/12**	**1071**	
1075	Finalize Deliverable 6.15.5 (Integration)	2 days	Fri 10/5/12	Mon 10/8/12		
1076	Deliverable Complete	0 days	Mon 10/8/12	Mon 10/8/12	1075	
1077	Deliverable Review	10 days	Tue 10/9/12	Mon 10/22/12	1076	
1078	Deliverable Resolution	10 days	Tue 10/23/12	Mon 11/5/12	1077	
1079	Deliverable Approved	0 days	Mon 11/5/12	Mon 11/5/12	1078	
1080	**Deliverable 6.15.5 Conversion Test Results (UAT)**	**21 days**	**Tue 1/1/13**	**Tue 1/29/13**	**1073**	
1081	Finalize Deliverable 6.15.5 (UAT)	1 day	Tue 1/1/13	Tue 1/1/13		
1082	Deliverable Complete	0 days	Tue 1/1/13	Tue 1/1/13	1081	
1083	Deliverable Review	10 days	Wed 1/2/13	Tue 1/15/13	1082	
1084	Deliverable Resolution	10 days	Wed 1/16/13	Tue 1/29/13	1083	
1085	Deliverable Approved	0 days	Tue 1/29/13	Tue 1/29/13	1084	
1086	**Task 6.15.6 Final Conversion**	**32 days**	**Mon 1/28/13**	**Tue 3/12/13**		
1087	Prepare Final Conversion Test Results Template	1 day	Mon 1/28/13	Mon 1/28/13		
1088	Template Review	1 day	Tue 1/29/13	Tue 1/29/13	1087	
1089	Template Approved	0 days	Tue 1/29/13	Tue 1/29/13	1088	
1090	Conduct Pass One Production Conversion	3 days	Wed 1/30/13	Fri 2/1/13	1089,1085	
1091	Conduct Production Conversion Sanity Test	3 days	Mon 2/4/13	Wed 2/6/13	1090	
1092	Conduct Pass Two Conversion	3 days	Thu 2/7/13	Mon 2/11/13	1091	
1093	**Deliverable 6.15.6 Final Conversion Test Results**	**21 days**	**Tue 2/12/13**	**Tue 3/12/13**	**1092**	
1094	Finalize Deliverable 6.15.6	1 day	Tue 2/12/13	Tue 2/12/13		
1095	Deliverable Complete	0 days	Tue 2/12/13	Tue 2/12/13	1094	
1096	Deliverable Review	10 days	Wed 2/13/13	Tue 2/26/13	1095	
1097	Deliverable Resolution	10 days	Wed 2/27/13	Tue 3/12/13	1096	
1098	Deliverable Approved	0 days	Tue 3/12/13	Tue 3/12/13	1097	
1099						

Figure 4.15-10. Conversion Schedule.
This figure depicts our time and effort estimation for each task of the conversion process, including Statewide Go-Live preparation and Statewide Go-Live phase.

The following picture depicts the conversion activities occurring during the FACTS II SDLC phases.

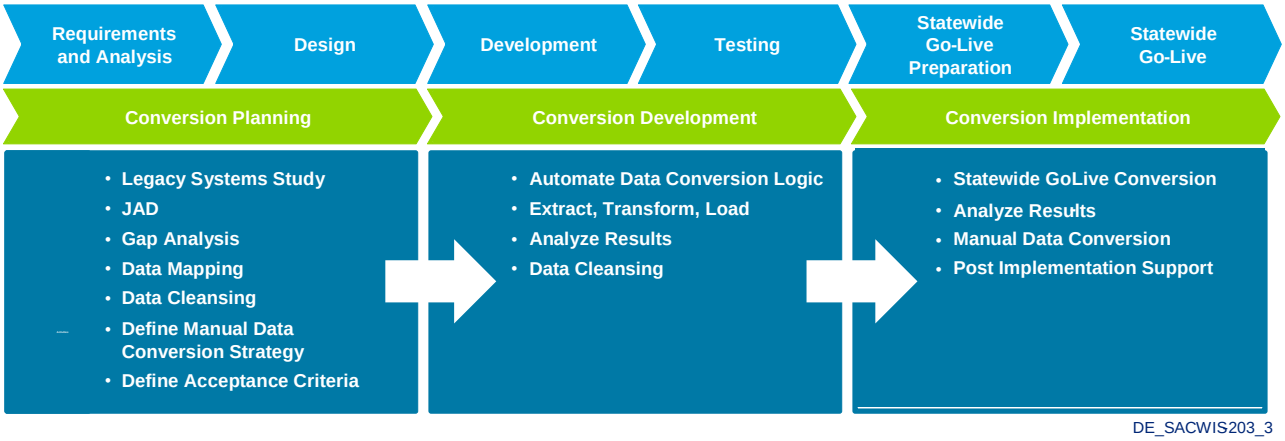

Figure 4.15-11. FACTS II Conversion Activities during SDLC Phases.
Deloitte's data conversion approach aligns activities with FACTS II SDLC phases.

The time required to perform each of these conversion activities is refined as the repetitive cycle continues throughout the SDLC phase. During our initial run in Integration Testing phase, we measure the time it takes to perform an automated conversion (complete data extract, transformation, load processes, data validation and cleansing for a production equivalent volume) from the legacy systems. This process is called "benchmarking".

During the UAT phase, the time required to perform both automated and manual conversion activities gets finalized. As the SDLC phases progress, the conversion schedule gets updated to closely match the time needed to perform the data conversion activities required for the implementation phase.

Prior to FACTS II going to Statewide Go-Live, the Deloitte team works with DSCYF to perform several benchmarking conversion dry runs on the Production Hardware. This exercise serves as very valuable input into the go-live and cutover planning activities.

Converting into a database that already contains data produces significantly different results over converting into an empty database. Therefore, it is essential that all focus be directed towards establishing a successful baseline conversion test on a production-like environment. After initial mock run, we work with DSCYF to establish a production-like environment for subsequent dry runs to substantiate baseline timings for the Statewide Go-Live conversion process.

Federal Reporting

RFP reference: 6.15 Conversion, Page 56

Bidders must indicate how they will ensure that sufficient data will be converted to continue the production of AFCARS, NCANDS, and NYTD reporting. Bidder must also describe how they will translate data encrypted for AFCARS reporting purposes.

Deloitte understands the data element required for federal reporting – AFCARS, NCANDS and NYTD. Federally assessed data elements are given highest priority during mapping exercise and Deloitte provides verification reports targeting federally assessed data elements. After these various factors are reviewed and confirmed, we then have an established data set to work with.

Deloitte works with the appropriate DSCYF reporting team to understand how the current AFCARS, NCANDS and NYTD reporting is performed and study the encryption rules used during the reporting process. Deloitte will work with the technical team to gather knowledge and logic of the encryption mechanism and continue to use in the conversion strategy to maintain the same encryption mechanism to read historical federal reporting report data.

The best way to measure the conversion of federally assessed data elements conversion accuracy is to compare AFCARS, NCANDS, NYTD reports from legacy system with reports from FACTS II. During integration testing Deloitte's Interface team runs interface programs to develop AFCARS, NCANDS, NYTD reports to test conversion of federally assessed elements against legacy application reports.

4.15.1 Associated Deliverables

RFP reference: 6.15.1 Associated Deliverables, Page 57

It should be noted that Conversion planning should be started during the requirements phase and conversions should be carried out throughout the life cycle as appropriate.

The following deliverables are required during the Conversion Phase:

- Data Conversion Plan (presented with the Data Schema);
- Data Conversion Specifications and Data Mapping, including data integrity rules and data conversion rules;
- Data Conversion Testing Plan, including the recommended or proposed use of converted data during Unit, System, Integration, User Acceptance, and/or Regression Testing, in addition to the testing of data conversion processes, correct implementation of data integrity rules, and correction implementation of data conversion rules;
- Data Conversion Testing Results Report; and
- Final Data Conversion Report, including recommended methods for any anticipated ongoing data verification and/or reconciliation.

After of completing the planned conversion activities, Deloitte submits the following deliverables per the RFP requirements.

Deliverable	Structure & Content	Toolset(s)
Data Conversion Plan	The Data Conversion Plan Report will include the following components: • Conversion requirements for the 4systems to be converted by Deloitte Consulting, including a requirements overview, assumptions and constraints, and scope, as well as implications for policy, training, security, and implementation • Revised State Conversion Requirements Document • Data Conversion Estimate • Revised State Data Cleanup and Reconciliation Plan	• Microsoft Office • SACWISmate
Data Conversion Specifications and Data Mapping	The Data Conversion specification document will provide: • Scope • Approach • Overview of the conversion design approach, detailed design components, and cross-reference matrices to application components for the 4 legacy systems. • Conversion Data Gap Analysis • Conversion Requirements Traceability Matrix	• Microsoft Office • SACWISmate
Data Conversion Testing Plan,	The Conversion Test Plan will provide: • Schedule of testing activities to validate the individual conversion program components. • Test Scripts	• Microsoft Office • SACWISmate
Data Conversion Testing Results Report	The Conversion Test Results deliverable will provide: • Summary of the conversion program testing activities • Certification of tested conversion components, modules, and programs. • Test Results • Verification Reports • Validation Reports	• Microsoft Office • SACWISmate

Deliverable	Structure & Content	Toolset(s)
Final Data Conversion Report	Final Data Conversion Report deliverable will include: • The Certification that the Data Conversion Programs have been tested and have been run to generate data for Systems Integration Testing. • The Data Conversion Readiness Certification that will include results of the data conversion activities, including: • Data Conversion Verification Reports • Data Conversion Validation Reports • Conversion Score Card	• Microsoft Office • SACWISmate

Figure 4.15-7 FACTS II Conversion Deliverable.